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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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IBM CORPORATION  
PO BOX 12195  
DEPT 9CCA, BLDG 002  
RESEARCH TRIANGLE PARK, NC 27709

EXAMINER

DU, THUAN N

ART UNIT	PAPER NUMBER
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2116

DATE MAILED: 08/18/2004

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Please find below and/or attached an Office communication concerning this application or proceeding.

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**Office Action Summary**

Application No.

09/788,253

Applicant(s)

ODAOHHARA ET AL.

Examiner

Thuan N. Du

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 03 May 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-10 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 10 is/are allowed.
- 6) ☒ Claim(s) 1,2 and 4-9 is/are rejected.
- 7) ☒ Claim(s) 3 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 03 May 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date <u>7</u> . | 6) <input type="checkbox"/> Other: _____  |

**DETAILED ACTION**

1. It is hereby acknowledged that the following papers have been received and placed of record in the file: Amendment A, IDS (both dated 5/3/04).
2. New claims 8-10 have been added. Claims 1-10 are presented for examination.
3. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

***Claim Rejections - 35 USC § 103***

4. Claims 1, 2 and 4-9 are rejected under 35 U.S.C. 103(a) as being unpatentable over applicant's admission of prior art [AAPA] in view of Schwan et al. [Schwan] (U.S. Patent No. 6,125,448).
5. **Regarding claim 1**, AAPA teaches a power supply protection apparatus, in a first device having a power line (notebook-type PC), comprising:
  - a diode (either D1 or D2) for limiting a flow of electric power to one direction [amendment A, p. 2, lines 2-3 of first paragraph], said diode being provided in said power line [amendment A, p. 2, lines 2-3 of first paragraph] that enables power supply within a predetermined range of said electric power [application's specification, p. 2, lines 22-24]; and
  - a switch unit for disconnecting/connecting said power line [application's specification, p. 3, lines 2-5].

AAPA does not explicitly teach the apparatus including a voltage sensor for detecting a voltage value of the power line. AAPA also does not explicitly teach the disconnecting/connecting act is based on the voltage value detected.

Schwan teaches a protection circuitry comprising a voltage sensor for detecting a voltage value of power line [col. 12, lines 51-58], wherein a switch is opened or closed for disconnecting or connecting the power line based on the comparison between the detected voltage value and a predetermined voltage value (threshold) [col. 12, line 58 to col. 13, line 11].

It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of AAPA and Schwan because they both directed to protection apparatus. Schwan's teaching of a voltage detection circuit would increase the integrity of AAPA's system by allowing the voltage across the power line is detected and determined to be sufficient or not. Therefore, the power line can be disconnected or connected base on the detected voltage across the power line to protect other circuits in the system.

6. **Regarding claim 2**, AAPA teaches that the switch unit includes a transistor element [application's specification, p. 3, lines 2-5].

7. **Regarding claim 4**, AAPA teaches that the predetermined voltage value [application's specification, p. 2, lines 22-24] is less than a dielectric strength voltage value of a component of said first device (notebook-type PC) operated with electric power supplied from said power line [application's specification, p. 3, lines 18-21], said component being provided upstream of said one direction [Fig. 5; application's specification, p. 3, lines 22-23].

8. **Regarding claim 5**, AAPA teaches that the power line is connected to a terminal of said first device (notebook-type PC) for connecting to a power line of a second device (152A or

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152B) conforming to the IEEE 1394 standard adopted by the IEEE in 1995 [Fig. 5; application's specification, p. 2, lines 26-27].

9. **Regarding claim 8**, AAPA teaches that the power line is connected to a terminal of said first device (notebook-type PC) for connecting to a power line of a second device (152A or 152B) [Fig. 5], said second device capable of supplying to said terminal of said first device a voltage of a level which would damage said first device [amendment A, p. 2, lines 5-7 of first paragraph, lines 1-4 of second paragraph].

10. **Regarding claim 6**, AAPA teaches a computer system (notebook-type PC) comprising:  
a battery for supplying electrical power over a power line [Fig. 5; application's specification, p. 2, lines 25-26];

a data processing circuitry connected to said power line and supplied with electrical power by said battery [Fig. 5; inner circuit 110], said data processing circuitry having associated therewith a withstand voltage value above which at least a portion of said data processing circuitry is not designed to operated (the inner circuit is operable at 9.0V-12.6V and not operable if the voltage value is greater than 12.6V) [application's specification, p. 3, lines 20-21];

a terminal connected to said power line, for connecting said computer system to at least one external device (device 152A, 152B) over a bus (bus 150) [Fig. 5];

a system protection circuitry (protection circuit 140) connected to said power line, disposed between said data processing circuitry and said terminal [Fig. 5], for protecting the data processing circuitry from voltages greater than said withstand voltage value caused on said power line by said at least one external device [application's specification, p. 3, lines 14-23]; the protection means comprising:

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a diode (either D1 or D2) provided in said power line [amendment A, p. 2, lines 2-3 of first paragraph]; and

switching means for disconnecting/connecting said power line [application's specification, p. 3, lines 2-5].

AAPA does not explicitly teach the apparatus including a voltage sensor for detecting a voltage value of the power line at said terminal. AAPA also does not explicitly teach the disconnecting/connecting act is based on the voltage value detected.

Schwan teaches a protection circuitry comprising a voltage sensor for detecting a voltage value of power line [col. 12, lines 51-58], wherein a switch is opened or closed for disconnecting or connecting the power line based on the comparison between the detected voltage value and a predetermined voltage value (threshold) [col. 12, line 58 to col. 13, line 11].

It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of AAPA and Schwan because they both directed to protection apparatus. Schwan's teaching of a voltage detection circuit would increase the integrity of AAPA's system by allowing the voltage across the power line is detected and determined to be sufficient or not. Therefore, the power line can be disconnected or connected base on the detected voltage across the power line to protect other circuits in the system.

11. **Regarding claim 7**, AAPA teaches that the bus (bus 150) conforms to the IEEE 1394 standard adopted by the IEEE in 1995 [Fig. 5; application's specification, p. 2, lines 26-27].

12. **Regarding claim 9**, AAPA teaches that the bus carries thereon a voltage of a level which would damage the computer system [amendment A, p. 2, lines 5-7 of first paragraph, lines 2-4 of second paragraph].

***Allowable Subject Matter***

13. Claim 3 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.
14. Claim 10 is allowed.

***Response to Argument***

15. Applicant's arguments filed May 3, 2004 have been fully considered but they are not persuasive.
16. In the Remarks, applicants argued in substance that AAPA does not teach "a single diode" configuration.
17. Examiner agrees with applicant that AAPA's system comprising two diodes to provide protection for the internal circuit. However, the pending claims (especially claims 1 and 6) of the instant application *do not require only a single diode* (emphasis added) to provide protection for the internal circuit. Therefore, AAPA (and Schwan) teach(es) the invention as claimed.

***Conclusion***

18. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO

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MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

19. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Thuan N. Du whose telephone number is (703) 308-6292. The examiner can normally be reached on Monday-Friday: 9:00 AM - 5:30 PM, EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Lynne H. Browne can be reached on (703) 308-1159.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 305-3900.

The fax number for the organization is (703) 872-9306.

  
LYNNE H. BROWNE  
SUPERVISORY PATENT EXAMINER  
TECHNOLOGY CENTER 3600 2100

Thuan N. Du  
August 17, 2004